

Application No. 10/014,381
Amendment Date: 05-04-04
Reply to Office Action of November 25, 2003

AMENDMENTS TO THE CLAIMS AND LISTING OF CLAIMS

1. (canceled)
2. (canceled)
3. (currently amended) The apparatus according to claim 4 21, wherein said outlet is configured to receive liquid tangentially from an inside perimeter of said ~~round~~ shell.
4. (currently amended) The apparatus according to claim 4 21 wherein said inlet is located within said shell and said apparatus comprises an inlet flume extending upstream from said inlet and penetrating said [rounded] shell and having a bottom substantially at a same elevation as a bottom of the particle extraction area.
5. (currently amended) The apparatus according to claim 4, wherein said inlet flume comprises a tunnel extending into said particle extraction area from an inside of said [rounded] shell to a said inlet.
6. (currently amended) The apparatus according to claim 5, wherein said outlet flume extends inside the [rounded] shell supported on said tunnel.
7. (currently amended) The apparatus according to claim 4 21, wherein said inlet and said outlet are arranged for tangential fluid flow with respect to said ~~rounded~~ shell.
8. (currently amended) The apparatus to claim 7, wherein said outlet comprises an outlet opening to said outlet flume located inside said ~~rounded~~ shell, said outlet opening having a bottom floor located at an elevation substantially at a mid elevation of said ~~rounded~~ shell.
9. (currently amended) The apparatus according to claim 8, wherein said Inlet is connected to an inlet tunnel within the ~~rounded~~ shell having a top plate located at an elevation substantially at a mid elevation of said [rounded] shell.
10. (currently amended) The apparatus according to claim 4 21, comprising a floor connected around a bottom of said ~~round~~ shell, said floor sloping toward said particle extraction collection area.
11. (canceled)

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12. (currently amended) The apparatus according to claim 11 23, wherein said inlet is configured to direct liquid tangentially into said ~~round~~ shell.

13. (currently amended) The apparatus according to claim 11 23, wherein said outlet is configured to receive liquid tangentially from an inside perimeter of said ~~round~~ shell.

14. (currently amended) The apparatus according to claim 11 23, wherein said apparatus comprises an inlet flume connected to said inlet and penetrating said ~~rounded~~ shell, and said inlet flume having a bottom substantially at a same elevation as a bottom of the particle extraction area.

15. (currently amended) The apparatus according to claim 14, wherein said inlet flume comprises a tunnel extending into said particle extraction area from an inside of said ~~rounded~~ shell to said inlet.

16. (currently amended) The apparatus according to claim 15, wherein said outlet flume extends inside the ~~rounded~~ shell supported on said tunnel.

17. (currently amended) The apparatus according to claim 11 23, wherein said inlet and said outlet are arranged for tangential fluid flow with respect to said ~~rounded~~ shell.

18. (currently amended) The apparatus according to claim 17, wherein said outlet comprises an outlet opening to said outlet flume located inside said rounded shell, said outlet opening having a bottom floor located at an elevation substantially at a mid elevation of said ~~rounded~~ shell.

19. (currently amended) The apparatus according to claim 18, wherein said inlet is extended by an inlet tunnel within the ~~rounded~~ shell having a top plate located at an elevation substantially at a mid elevation of said ~~rounded~~ shell.

20. (currently amended) The apparatus according to claim 11 23, wherein said floor is sloped toward said particle collection area.

21. (new) An apparatus for removing solid particles from a liquid, comprising:

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a substantially round shell having an inlet located within said shell and an outlet located within said shell, said outlet being elevated from said inlet, said shell defining a particle extraction area;

an outlet flume extending from said outlet and having a floor overhanging at least a portion of the particle extraction area; and

a particle collection area located centrally of said particle extraction area;

wherein said inlet includes a substantially vertical inner wall that extends upwardly a distance within said shell so as to direct liquid tangentially into said shell and substantially preclude communication between the liquid in the inlet and the liquid in the particle extraction area.

22. (new) The apparatus according to claim 21, wherein said vertical inner wall maintains a substantially straight flow within the inlet and directs the flow of liquid in a portion of the shell adjacent thereto to be substantially parallel to the inlet flow so that as the inlet flow enters the shell without substantial mixing with the liquid flow in the shell and forces the flow of liquid upwardly over the flow of liquid from the inlet.

23. (new) An apparatus for removing solid particles from a liquid, comprising:

a substantially round shell having an inlet located within said shell and an outlet located within said shell, said outlet being elevated from said inlet, said shell defining a particle extraction area;

an outlet flume extending from said outlet and having a floor overhanging at least a portion of the particle extraction area; and

a particle collection area located centrally of said particle extraction area;

wherein said outlet flume includes a vertical inner wall that extends upwardly a distance within said shell so as to separate the liquid flow in the outlet flume from the circulating liquid in the particle extraction area so as to preclude said circulating liquid from entering said outlet flume.

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24. (new) The apparatus according to claim 23, wherein said outlet flume further includes a wall portion at the opening thereof into said shell that is angled to shear off liquid circulating in said shell.